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## RAW SEQUENCE LISTING

DATE: 07/07/2001

PATENT APPLICATION: US/09/887,052

TIME: 12:54:39

Input Set : A:\204212US0X.txt

Output Set: N:\CRF3\07062001\I887052.raw

3 <110> APPLICANT: MOECKEL, Bettina  
 4 BATHE, Brigitte  
 5 HERMANN, Thomas  
 6 PFEFFERLE, Walter  
 7 BINDER, Michael  
 9 <120> TITLE OF INVENTION: NUCLEOTIDE SEQUENCES WHICH CODE FOR THE rpoB GENE  
 11 <130> FILE REFERENCE: 204212US0X  
 C--> 13 <140> CURRENT APPLICATION NUMBER: US/09/887,052  
 C--> 13 <141> CURRENT FILING DATE: 2001-06-25  
 13 <150> PRIOR APPLICATION NUMBER: DE10107229.5  
 14 <151> PRIOR FILING DATE: 2001-02-16  
 16 <160> NUMBER OF SEQ ID NOS: 8  
 18 <170> SOFTWARE: PatentIn version 3.0  
 20 <210> SEQ ID NO: 1  
 21 <211> LENGTH: 5099  
 22 <212> TYPE: DNA  
 23 <213> ORGANISM: Corynebacterium glutamicum  
 25 <220> FEATURE:  
 26 <221> NAME/KEY: CDS  
 27 <222> LOCATION: (702)..(4196)  
 29 <400> SEQUENCE: 1

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32	aaaatattga	tgatttttac	ggcgaccgca	gcgccagaa	gtacgaacag	aaattgcttt	120
34	tcgaagcctc	cctcgacgat	gcagctgtct	ctaagctggt	tgacacaggcc	gaaagcatcc	180
36	ctgatggaga	tgtgagcaaa	atcgcaata	ccgtaggat	tgtgatcggg	gcggatttgg	240
38	ctctcgtggg	cctggccggg	tgttttgggg	cgtttgagg	gaaacgctga	gaagcttaac	300
40	ctgctgttca	aatagatttt	ccctgtttcg	aattgcggaa	accccggtt	tgtttgctag	360
42	ggtgcctcgt	agaaggggtc	aagaagattt	ctgggaaacg	cgcccgtgcg	gttggttgc	420
44	aatgacacgc	ggagcaccag	atgaaaaatc	tcccctttac	tttcgcgcgc	gattggtata	480
46	ctctgagtcg	ttgcgtttga	attcgtgact	ctttttcgtt	cctgtagcgc	caagaccttg	540
48	atcaaggtgg	tttaaaaaaa	ccgatttgac	aaggctattc	agtgtatct	ggagtcgttc	600
50	agggggatcg	ggttcctcag	cagaccaatt	gctcaaaaat	accagcggg	ttgatctgca	660
52	cttaattggc	ttgaccagcc	aggtgcaatt	acccgcgtga	g	gtg ctg gaa gga ccc	716
53					Val Leu Glu Gly Pro		
54					1	5	
56	atc ttg gca gtc tcc cgc cag acc aag tca gtc gtc gat att ccc ggt	764					
57	Ile Leu Ala Val Ser Arg Gln Thr Lys Ser Val Val Asp Ile Pro Gly						
58	10	15	20				
60	gca ccg cag cgt tat tct ttc gcg aag gtg tcc gca ccc att gag gtg	812					
61	Ala Pro Gln Arg Tyr Ser Phe Ala Lys Val Ser Ala Pro Ile Glu Val						
62	25	30	35				
64	ccc ggg cta cta gat ctt caa ctg gat tct tac tcc tgg ctg att ggt	860					
65	Pro Gly Leu Leu Asp Leu Gln Leu Asp Ser Tyr Ser Trp Leu Ile Gly						
66	40	45	50				
68	acg cct gag tgg cgt gct cgt cag aag gaa gaa ttc ggc gag gga gcc	908					
69	Thr Pro Glu Trp Arg Ala Arg Gln Lys Glu Glu Phe Gly Glu Gly Ala						
70	55	60	65				

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72 cgc gta acc agc ggc ctt gag aac att ctc gag gag ctc tcc cca atc      956
73 Arg Val Thr Ser Gly Leu Glu Asn Ile Leu Glu Glu Leu Ser Pro Ile
74 70      75      80      85
76 cag gat tac tct gga aac atg tcc ctg agc ctt tcg gag cca cgc ttc      1004
77 Gln Asp Tyr Ser Gly Asn Met Ser Leu Ser Leu Ser Glu Pro Arg Phe
78      90      95      100
80 gaa gac gtc aag aac acc att gac gag gcg aaa gaa aag gac atc aac      1052
81 Glu Asp Val Lys Asn Thr Ile Asp Glu Ala Lys Glu Lys Asp Ile Asn
82      105      110      115
84 tac gcg gcg cca ctg tat gtg acc gcg gag ttc gtc aac aac acc acc      1100
85 Tyr Ala Ala Pro Leu Tyr Val Thr Ala Glu Phe Val Asn Asn Thr Thr
86      120      125      130
88 ggt gaa atc aag tct cag act gtc ttc atc ggc gat ttc cca atg atg      1148
89 Gly Glu Ile Lys Ser Gln Thr Val Phe Ile Gly Asp Phe Pro Met Met
90      135      140      145
92 acg gac aag gga acg ttc atc atc aac gga acc gaa cgc gtt gtg gtc      1196
93 Thr Asp Lys Gly Thr Phe Ile Ile Asn Gly Thr Glu Arg Val Val Val
94 150      155      160      165
96 agc cag ctc gtc cgc tcc ccg ggc gtg tac ttt gac cag acc atc gat      1244
97 Ser Gln Leu Val Arg Ser Pro Gly Val Tyr Phe Asp Gln Thr Ile Asp
98      170      175      180
100 aag tca act gag cgt cca ctg cac gcc gtg aag gtt att cct tcc cgt      1292
101 Lys Ser Thr Glu Arg Pro Leu His Ala Val Lys Val Ile Pro Ser Arg
102      185      190      195
104 ggt gct tgg ctt gag ttt gac gtc gat aag cgc gat tcg gtt ggt gtt      1340
105 Gly Ala Trp Leu Glu Phe Asp Val Asp Lys Arg Asp Ser Val Gly Val
106      200      205      210
108 cgt att gac cgc aag cgt cgc cag cca gtc acc gta ctg ctg aag gct      1388
109 Arg Ile Asp Arg Lys Arg Arg Gln Pro Val Thr Val Leu Leu Lys Ala
110      215      220      225
112 ctt ggc tgg acc act gag cag atc acc gag cgt ttc ggt ttc tct gaa      1436
113 Leu Gly Trp Thr Thr Glu Gln Ile Thr Glu Arg Phe Gly Phe Ser Glu
114 230      235      240      245
116 atc atg atg tcc acc ctc gag tcc gat ggt gta gca aac acc gat gag      1484
117 Ile Met Met Ser Thr Leu Glu Ser Asp Gly Val Ala Asn Thr Asp Glu
118      250      255      260
120 gca ttg ctg gag atc tac cgc aag cag cgt cca ggc gag cag cct acc      1532
121 Ala Leu Leu Glu Ile Tyr Arg Lys Gln Arg Pro Gly Glu Gln Pro Thr
122      265      270      275
124 cgc gac ctt gcg cag tcc ctc ctg gac aac agc ttc ttc cgt gca aag      1580
125 Arg Asp Leu Ala Gln Ser Leu Leu Asp Asn Ser Phe Phe Arg Ala Lys
126      280      285      290
128 cgc tac gac ctg gct cgc gtt ggt cgt tac aag atc aac cgc aag ctc      1628
129 Arg Tyr Asp Leu Ala Arg Val Gly Arg Tyr Lys Ile Asn Arg Lys Leu
130      295      300      305
132 ggc ctt ggt ggc gac cac gat ggt ttg atg act ctt act gaa gag gac      1676
133 Gly Leu Gly Gly Asp His Asp Gly Leu Met Thr Leu Thr Glu Glu Asp
134 310      315      320      325
136 atc gca acc acc atc gag tac ctg gtg cgt ctg cac gca ggt gag cgc      1724

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137	Ile	Ala	Thr	Thr	Ile	Glu	Tyr	Leu	Val	Arg	Leu	His	Ala	Gly	Glu	Arg	
138					330					335					340		
140	gtc	atg	act	tct	cca	aat	ggg	gaa	gag	atc	cca	gtc	gag	acc	gat	gac	1772
141	Val	Met	Thr	Ser	Pro	Asn	Gly	Glu	Glu	Ile	Pro	Val	Glu	Thr	Asp	Asp	
142				345					350					355			
144	atc	gac	cac	ttt	ggg	aac	cgt	cgt	ctg	cgt	acc	gtt	ggc	gaa	ctg	atc	1820
145	Ile	Asp	His	Phe	Gly	Asn	Arg	Arg	Leu	Arg	Thr	Val	Gly	Glu	Leu	Ile	
146			360					365					370				
148	cag	aac	cag	gtc	cgt	gtc	ggc	ctg	tcc	cgc	atg	gag	cgc	gtt	gtt	cgt	1868
149	Gln	Asn	Gln	Val	Arg	Val	Gly	Leu	Ser	Arg	Met	Glu	Arg	Val	Val	Arg	
150		375					380				385						
152	gag	cgt	atg	acc	acc	cag	gat	gcg	gag	tcc	att	act	cct	act	tcc	ttg	1916
153	Glu	Arg	Met	Thr	Thr	Gln	Asp	Ala	Glu	Ser	Ile	Thr	Pro	Thr	Ser	Leu	
154	390					395				400					405		
156	atc	aac	gtt	cgt	cct	gtc	tct	gca	gct	atc	cgt	gag	ttc	ttc	gga	act	1964
157	Ile	Asn	Val	Arg	Pro	Val	Ser	Ala	Ala	Ile	Arg	Glu	Phe	Phe	Gly	Thr	
158				410					415					420			
160	tcc	cag	ctg	tct	cag	ttc	atg	gac	cag	aac	aac	tcc	ctg	tct	ggg	ttg	2012
161	Ser	Gln	Leu	Ser	Gln	Phe	Met	Asp	Gln	Asn	Asn	Ser	Leu	Ser	Gly	Leu	
162			425					430					435				
164	act	cac	aag	cgt	cgt	ctg	tcg	gct	ctg	ggc	ccg	ggg	ggg	ctg	tcc	cgt	2060
165	Thr	His	Lys	Arg	Arg	Leu	Ser	Ala	Leu	Gly	Pro	Gly	Gly	Leu	Ser	Arg	
166		440				445				450			455				
168	gag	cgc	gcc	ggc	atc	gag	gtt	cga	gac	gtt	cac	cca	tct	cac	tac	ggc	2108
169	Glu	Arg	Ala	Gly	Ile	Glu	Val	Arg	Asp	Val	His	Pro	Ser	His	Tyr	Gly	
170		455				460				465							
172	cgt	atg	tgc	cca	att	gag	act	ccg	gaa	ggg	cca	aac	att	ggc	ctg	atc	2156
173	Arg	Met	Cys	Pro	Ile	Glu	Thr	Pro	Glu	Gly	Pro	Asn	Ile	Gly	Leu	Ile	
174	470				475				480					485			
176	ggg	tcc	ttg	gct	tcc	tat	gct	cga	gtg	aac	cca	ttc	ggg	ttc	att	gag	2204
177	Gly	Ser	Leu	Ala	Ser	Tyr	Ala	Arg	Val	Asn	Pro	Phe	Gly	Phe	Ile	Glu	
178			490					495					500				
180	acc	cca	tac	cgt	cgc	atc	atc	gac	ggc	aag	ctg	acc	gac	cag	att	gac	2252
181	Thr	Pro	Tyr	Arg	Arg	Ile	Ile	Asp	Gly	Lys	Leu	Thr	Asp	Gln	Ile	Asp	
182			505					510					515				
184	tac	ctt	acc	gct	gat	gag	gaa	gac	cgc	ttc	gtt	gtt	gcg	cag	gca	aac	2300
185	Tyr	Leu	Thr	Ala	Asp	Glu	Glu	Asp	Arg	Phe	Val	Val	Ala	Gln	Ala	Asn	
186		520				525				530							
188	acg	cac	tac	gac	gaa	gag	ggc	aac	atc	acc	gat	gag	acc	gtc	act	gtt	2348
189	Thr	His	Tyr	Asp	Glu	Glu	Gly	Asn	Ile	Thr	Asp	Glu	Thr	Val	Thr	Val	
190		535				540				545							
192	cgt	ctg	aag	gac	ggc	gac	atc	gcc	atg	gtt	ggc	cgc	aac	gcg	gtt	gat	2396
193	Arg	Leu	Lys	Asp	Gly	Asp	Ile	Ala	Met	Val	Gly	Arg	Asn	Ala	Val	Asp	
194	550				555				560				565				
196	tac	atg	gac	gtt	tcc	cct	cgt	cag	atg	gtt	tct	gtt	ggg	acc	gcg	atg	2444
197	Tyr	Met	Asp	Val	Ser	Pro	Arg	Gln	Met	Val	Ser	Val	Gly	Thr	Ala	Met	
198			570					575					580				
200	att	cca	ttc	ctg	gag	cac	gac	gat	gct	aac	cgt	gca	ctg	atg	ggc	gcg	2492
201	Ile	Pro	Phe	Leu	Glu	His	Asp	Asp	Ala	Asn	Arg	Ala	Leu	Met	Gly	Ala	

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202	585	590	595	
204 aac atg cag aag cag gct gtg cca ctg att cgt gcc gag gct cct ttc				2540
205 Asn Met Gln Lys Gln Ala Val Pro Leu Ile Arg Ala Glu Ala Pro Phe				
206 600 605 610				
208 gtg ggc acc ggt atg gag cag cgc gca gca tac gac gcc ggc gac ctg				2588
209 Val Gly Thr Gly Met Glu Gln Arg Ala Ala Tyr Asp Ala Gly Asp Leu				
210 615 620 625				
212 gtt att acc cca gtc gca ggt gtg gtg gaa aac gtt tca gct gac ttc				2636
213 Val Ile Thr Pro Val Ala Gly Val Val Glu Asn Val Ser Ala Asp Phe				
214 630 635 640 645				
216 atc acc atc atg gct gat gac ggc aag cgc gaa acc tac ctg ctg cgt				2684
217 Ile Thr Ile Met Ala Asp Asp Gly Lys Arg Glu Thr Tyr Leu Leu Arg				
218 650 655 660				
220 aag ttc cag cgc acc aac cag ggc acc agc tac aac cag aag cct ttg				2732
221 Lys Phe Gln Arg Thr Asn Gln Gly Thr Ser Tyr Asn Gln Lys Pro Leu				
222 665 670 675				
224 gtt aac ttg ggc gag cgc gtt gaa gct ggc cag gtt att gct gat ggt				2780
225 Val Asn Leu Gly Glu Arg Val Glu Ala Gly Gln Val Ile Ala Asp Gly				
226 680 685 690				
228 cca ggt acc ttc aat ggt gaa atg tcc ctt ggc cgt aac ctt ctg gtt				2828
229 Pro Gly Thr Phe Asn Gly Glu Met Ser Leu Gly Arg Asn Leu Leu Val				
230 695 700 705				
232 gcg ttc atg cct tgg gaa ggc cac aac tac gag gat gcg atc atc ctc				2876
233 Ala Phe Met Pro Trp Glu Gly His Asn Tyr Glu Asp Ala Ile Ile Leu				
234 710 715 720 725				
236 aac cag aac atc gtt gag cag gac atc ttg acc tcg atc cac atc gag				2924
237 Asn Gln Asn Ile Val Glu Gln Asp Ile Leu Thr Ser Ile His Ile Glu				
238 730 735 740				
240 gag cac gag atc gat gcc cgc gac act aag ctt ggc gcc gaa gaa atc				2972
241 Glu His Glu Ile Asp Ala Arg Asp Thr Lys Leu Gly Ala Glu Glu Ile				
242 745 750 755				
244 acc cgc gac atc cct aat gtg tct gaa gaa gtc ctc aag gac ctc gac				3020
245 Thr Arg Asp Ile Pro Asn Val Ser Glu Glu Val Leu Lys Asp Leu Asp				
246 760 765 770				
248 gac cgc ggt att gtc cgc atc ggt gct gat gtt cgt gac ggc gac atc				3068
249 Asp Arg Gly Ile Val Arg Ile Gly Ala Asp Val Arg Asp Gly Asp Ile				
250 775 780 785				
252 ctg gtc ggt aag gtc acc cct aag ggc gag acc gag ctc acc ccg gaa				3116
253 Leu Val Gly Lys Val Thr Pro Lys Gly Glu Thr Glu Leu Thr Pro Glu				
254 790 795 800 805				
256 gag cgc ttg ctg cgc gca atc ttc ggt gag aag gcc cgc gaa gtt cgc				3164
257 Glu Arg Leu Leu Arg Ala Ile Phe Gly Glu Lys Ala Arg Glu Val Arg				
258 810 815 820				
260 gat acc tcc atg aag gtg cct cac ggt gag acc ggc aag gtc atc ggc				3212
261 Asp Thr Ser Met Lys Val Pro His Gly Glu Thr Gly Lys Val Ile Gly				
262 825 830 835				
264 gtg cgt cac ttc tcc cgc gag gac gac gac gat ctg gct cct ggc gtc				3260
265 Val Arg His Phe Ser Arg Glu Asp Asp Asp Asp Leu Ala Pro Gly Val				
266 840 845 850				

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268	aac	gag	atg	atc	cgt	atc	tac	gtt	gct	cag	aag	cgt	aag	atc	cag	gac	3308
269	Asn	Glu	Met	Ile	Arg	Ile	Tyr	Val	Ala	Gln	Lys	Arg	Lys	Ile	Gln	Asp	
270		855					860					865					
272	ggc	gat	aag	ctc	gct	ggc	cgc	cac	ggg	aac	aag	ggg	gtt	gtc	ggg	aaa	3356
273	Gly	Asp	Lys	Leu	Ala	Gly	Arg	His	Gly	Asn	Lys	Gly	Val	Val	Gly	Lys	
274	870					875					880					885	
276	att	ttg	cct	cag	gaa	gat	atg	cca	ttc	ctt	cca	gac	ggc	act	cct	gtt	3404
277	Ile	Leu	Pro	Gln	Glu	Asp	Met	Pro	Phe	Leu	Pro	Asp	Gly	Thr	Pro	Val	
278					890						895				900		
280	gac	atc	atc	ttg	aac	acc	cac	ggg	gtt	cca	cgt	cgt	atg	aac	att	ggg	3452
281	Asp	Ile	Ile	Leu	Asn	Thr	His	Gly	Val	Pro	Arg	Arg	Met	Asn	Ile	Gly	
282					905					910				915			
284	cag	gtt	ctt	gag	acc	cac	ctt	ggc	tgg	ctg	gca	tct	gct	ggg	tgg	tcc	3500
285	Gln	Val	Leu	Glu	Thr	His	Leu	Gly	Trp	Leu	Ala	Ser	Ala	Gly	Trp	Ser	
286			920					925					930				
288	gtg	gat	cct	gaa	gat	cct	gag	aac	gct	gag	ctc	gtc	aag	act	ctg	cct	3548
289	Val	Asp	Pro	Glu	Asp	Pro	Glu	Asn	Ala	Glu	Leu	Val	Lys	Thr	Leu	Pro	
290		935					940						945				
292	gca	gac	ctc	ctc	gag	gtt	cct	gct	ggg	tcc	ttg	act	gca	act	cct	gtg	3596
293	Ala	Asp	Leu	Leu	Glu	Val	Pro	Ala	Gly	Ser	Leu	Thr	Ala	Thr	Pro	Val	
294	950					955					960					965	
296	ttc	gac	ggg	gcg	tca	aac	gaa	gag	ctc	gca	ggc	ctg	ctc	gct	aat	tca	3644
297	Phe	Asp	Gly	Ala	Ser	Asn	Glu	Glu	Leu	Ala	Gly	Leu	Leu	Ala	Asn	Ser	
298					970					975				980			
300	cgt	cca	aac	cgc	gac	ggc	gac	gtc	atg	gtt	aac	gcg	gat	ggg	aaa	gca	3692
301	Arg	Pro	Asn	Arg	Asp	Gly	Asp	Val	Met	Val	Asn	Ala	Asp	Gly	Lys	Ala	
302					985					990				995			
304	acg	ctt	atc	gac	ggg	cgc	tcc	ggg	gag	cct	tac	ccg	tac	ccg	gtt		3737
305	Thr	Leu	Ile	Asp	Gly	Arg	Ser	Gly	Glu	Pro	Tyr	Pro	Tyr	Pro	Val		
306			1000					1005						1010			
308	tcc	atc	ggc	tac	atg	tac	atg	ctg	aag	ctg	cac	cac	ctc	gtt	gac		3782
309	Ser	Ile	Gly	Tyr	Met	Tyr	Met	Leu	Lys	Leu	His	His	Leu	Val	Asp		
310			1015					1020						1025			
312	gag	aag	atc	cac	gca	cgt	tcc	act	ggg	cct	tac	tcc	atg	att	acc		3827
313	Glu	Lys	Ile	His	Ala	Arg	Ser	Thr	Gly	Pro	Tyr	Ser	Met	Ile	Thr		
314			1030					1035						1040			
316	cag	cag	cca	ctg	ggg	ggg	aaa	gca	cag	ttc	ggg	gga	cag	cgt	ttc		3872
317	Gln	Gln	Pro	Leu	Gly	Gly	Lys	Ala	Gln	Phe	Gly	Gly	Gln	Arg	Phe		
318			1045					1050						1055			
320	ggc	gaa	atg	gag	gtg	tgg	gca	atg	cag	gca	tac	ggc	gct	gcc	tac		3917
321	Gly	Glu	Met	Glu	Val	Trp	Ala	Met	Gln	Ala	Tyr	Gly	Ala	Ala	Tyr		
322			1060					1065						1070			
324	aca	ctt	cag	gag	ctg	ctg	acc	atc	aag	tct	gat	gac	gtg	gtt	ggc		3962
325	Thr	Leu	Gln	Glu	Leu	Leu	Thr	Ile	Lys	Ser	Asp	Asp	Val	Val	Gly		
326			1075					1080						1085			
328	cgt	gtc	aag	gtc	tac	gaa	gca	att	gtg	aag	ggc	gag	aac	atc	ccg		4007
329	Arg	Val	Lys	Val	Tyr	Glu	Ala	Ile	Val	Lys	Gly	Glu	Asn	Ile	Pro		
330			1090					1095						1100			
332	gat	cca	ggg	att	cct	gag	tcc	ttc	aag	gtt	ctc	ctc	aag	gag	ctc		4052

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L:13 M:270 C: Current Application Number differs, Replaced Current Application No

L:13 M:271 C: Current Filing Date differs, Replaced Current Filing Date